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09/746,484	12/21/2000	Rahul R. Vaid	RVZ-003.01	8996
26231 7590 01/31/2007 FISH & RICHARDSON P.C. P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER BRUCKART, BENJAMIN R	
			ART UNIT 2155	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

09/746,484

Applicant(s)

VAID, RAHUL R.

Examiner

Benjamin R. Bruckart

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **Detailed Action**

#### **Status of Claims:**

Claims 1-30 are pending in this Office Action.

Claims 1-3, 5, 8-9, 13-15, 17-29 are amended.

Claim 30 is new.

The objection to the specification is removed in view of the new title filed 9/26/06 and the amendments filed 12/4/06.

The 35 U.S.C. 112, first and second paragraphs are withdrawn in light of the amendments.

### **Response to Arguments**

Applicant's arguments filed in the amendment filed 12/4/06, have been fully considered but they are not persuasive. The reasons are set forth below.

#### **Applicant's invention as claimed:**

**Claims 1-9, 11-30 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,804,558 by Hallerton et al.**

Regarding claim 1, an apparatus for aggregating terminal communications (Hallerton: col. 8, lines 2-18), the apparatus comprising:

a plurality of local terminal ports including at least one wired local terminal port (Haller: col. 18, lines 38-52; Fig. 4) and at least one wireless terminal local port (Haller: col. 18, lines 52-55), the local terminal ports each configured to establish bi-directional data communications with at least one respective local terminal, and at least two of the local terminal ports using different communication protocols (Haller: col. 22, lines 18-34 and line 49- col. 23, line 35);

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a remote access port, the remote access port configured to establish bi-directional wireless data communications with a service provider (Haller: col. 8, lines 8-15; col. 18, lines 21-37);

a processing system for converting data signals between a form adapted to one of the plurality of local terminal ports and a form adapted to the remote access port (Haller: col. 8, lines 19-25; col. 12, lines 28-40; col. 15, lines 27-41); and

a multiplexer in communication with said processing system to multiplex the converted data signals from the at least two of the local terminal ports to communicate data of the local terminals simultaneously via said remote access port to the server provider (Haller: Fig. 4; col. 13, lines 57- col. 14, line 5; col. 7, lines 35-41).

Regarding claim 2, the apparatus of claim 1, the processing system further comprising a port processing unit that converts data signals between a form adapted to more than one of the plurality of local terminal ports into a form adapted to a multiple access air interface of the remote access port (Haller: col. 8, lines 19-25; col. 12, lines 28-40; col. 15, lines 27-41).

Regarding claim 3, the apparatus of claim 1, the processing system further comprising a shared signal processing unit that converts data signals between a form adapted to more than one of the plurality of local terminal ports into a form adapted to a single channel of the remote access port (Haller: col. 23, lines 47- col. 24, line 28).

Regarding claim 4, the apparatus of claim 1, wherein the apparatus is shaped and sized to be worn by a person (Haller: Fig. 1 and 2).

Regarding claim 5, the apparatus of claim 1 wherein the plurality of local terminal ports include at least one of a Bluetooth port, a HomeRF port, an IrDA port, a wireless Ethernet port, a wired serial port, a wired parallel port, or a wireless local area network port (Haller: col. 23, lines 30-45).

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Regarding claim 6, the apparatus of claim 1 wherein the remote access port includes a wireless port (Haller: col. 18, lines 38-61).

Regarding claim 7, the apparatus of claim 6 wherein the wireless port includes at least one of a CDMA port, a TDM port, a GSM port, a PCS port, or a third generation cellular telephony port (Haller: col. 8, lines 42-56).

Regarding claim 8, the apparatus of claim 1, the service provider connected in a communicating relationship with the remote access port through an air interface establishing bi-directional wireless data communications with the remote access port, and the service provider including an Internet connection, whereby a local terminal connected in a communicating relationship with one of the plurality of local terminal ports may communicate through the Internet (Haller: col. 19, lines 11-16).

Regarding claim 9, the apparatus of claim 1 further comprising a local terminal connecting in a communicating relationship with one of the plurality of local terminal ports, the local terminal including at least one of a personal digital assistant, a notebook computer, a laptop computer, a cellular phone, a palm computer, or a wearable computer (Haller: col. 8, lines 42-56).

Regarding claim 11, the apparatus of claim 1, the remote access port including a plurality of data channels, the bi-directional wireless data communications being distributed among two or more of the plurality of data channels (Haller: col. 42, lines 48-63).

Regarding claim 12, the apparatus of claim 1 wherein the body is at least one of a portable accessory, a modular add-on device, or a base station accessory (Haller: Figures 1-3).

Regarding claim 13, the apparatus of claim 1, the processing system further comprising one or more processors that convert traffic between data for more than one of the plurality of local terminal ports and data for a logical channel of the remote access port (Haller: col. 8, lines 19-25; col. 12, lines 28-40; col. 15, lines 27-41).

Regarding claim 14, the apparatus of claim 1, the processing system further comprising one or more processors that convert traffic between data for more than one of the plurality of local ports and data for a plurality of logical channels of the remote access terminal ports (Haller: col. 8, lines 19-25; col. 12, lines 28-40; col. 15, lines 27-41).

Regarding claim 15, the apparatus of claim 1 further comprising a services unit that provides network services to the plurality of local ports (Haller: col. 6, lines 50-62).

Regarding claim 16, the apparatus of claim 15, the network services including at least one of device connectivity, error detection and correction, load balancing, caching, traffic management, congestion control, file sharing, printer sharing, and distributed computing (Haller: col. 18, lines 16- col. 19, line 10).

Regarding claim 17, the apparatus of claim 1 wherein the plurality of local terminal ports comprise a terminal port cluster, the terminal port cluster including a plurality of connectors, each connector adapted to removably receive a modular device port, the modular device port adapted to a single communications technique (Haller: col. 14, lines 39-54).

Regarding claim 18, a system for aggregating terminal communications (Haller: col. 8, lines 2-26), the apparatus comprising:

a plurality of local terminal communications means for maintaining communications with one or more local terminal (Haller: col. 23, lines 30-35), the plurality of local terminal communications means including at least one wired local terminal communications means (Haller: col. 18, lines 38-52) and at least one wireless local communications means (Haller: col. 18, lines 52-55) configured to establish bi-directional data communications with the one or more local terminal, at least two of the local terminal communications means using different communications protocols (Haller: col. 22, lines 18-34 and line 49- col. 23, line 35);

a remote communications means for maintaining wireless communications with a service provider (Haller: col. 8, lines 19-25);

a converting means for converting data signals between a form adapted to the plurality of local terminal communications means and the remote communications means (Haller: col. 19, lines 11-16); and

a multiplexing means for multiplexing the converted data signals from the at least two of the local terminal communications means to communicate data of said local terminal communications means simultaneously via said remote communications means to the service provider (Haller: Fig. 4; col. 13, lines 57- col. 14, line 5; col. 7, lines 35-41).

Regarding claim 19, a method for aggregating terminal communications (Haller: col. 8, lines 2-26), the method comprising:

receiving local data from a plurality of local terminal (Haller: col. 23, lines 30-35), via at least one wired local terminal communications port (Haller: col. 18, lines 38-52) and at least one wireless local terminal communications port (Haller: col. 18, lines 52-55), at least two of the terminal local communications ports using different communications protocols (Haller: col. 22, lines 18-34 and line 49- col. 23, line 35;

converting the local terminal data into converted local terminal data, the converted local terminal data having a form suitable for transmission over a wireless communication link (Haller: col. 8, lines 19-25; col. 12, lines 28-40; col. 15, lines 27-41);

multiplexing the converted local terminal data from the at least two of the local terminal communications ports to communicate data of the local terminals simultaneously over the wireless communications link (Haller: Fig. 4; col. 13, lines 57- col. 14, line 5; col. 7, lines 35-41);

transmitting the converted local terminal data over the wireless communication link (Haller: col. 18, lines 38-61);

receiving network data from a service provider over the wireless communication link (Haller: col. 19, lines 11-16);

demultiplexing the converted network data from the service provider at least two of the local communication ports to communicate data of the local terminals simultaneously (Haller: Fig. 4; col. 7, lines 35-41);

converting the network data into converted network data, the converted network data having a form suitable for transmission to one or more of the plurality of local terminal (Haller: col. 41, lines 50-67); and

simultaneously transmitting the converted network data to one or more of the plurality of local terminal (Haller: col. 41, lines 50-67), via at least one of the wired or wireless local terminal communications ports (Haller: col. 18, lines 38-55).

Regarding claim 20, the method of claim 19 wherein converting the local data includes multiplexing (Haller: col. 8, lines 19-25; col. 12, lines 28-40; col. 15, lines 27-41) the local terminal data into a plurality of data streams corresponding to more than one channel of a multiple access wireless interface (Haller: col. 42, lines 48-63).

Regarding claim 21, the method of claim 19 wherein converting the local data includes sequentially converting the local data from selected ones of the plurality of local terminal (Haller: col. 12, lines 9-40; col. 29, lines 15-29).

Regarding claim 22, the method of claim 19 wherein converting the local terminal data includes prioritizing the plurality of local terminal and converting data from a selected one of the plurality of local terminal according to a priority of the selected one of the plurality of local terminal (Haller: col. 12, lines 9-40; col. 29, lines 15-29).

Regarding claim 23, an apparatus for aggregating terminal communications (Haller: col. 8, lines 2-26), the apparatus comprising:

a plurality of local terminal ports including at least one wired local terminal port (Haller: col. 18, lines 38-52) and at least one wireless local terminal port (Haller: col. 18, lines 52-55), the local ports each configured to establish bi-directional data communications with at least one



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respective local terminal, and at least two of the local terminal ports using a different communication protocols (Haller: col. 22, lines 18-34 and line 49- col. 23, line 35);

a remote access port, the remote access port configured to establish bi-directional, wireless, data communications with a service provider (Haller: col. 8, lines 8-15; col. 18, lines 21-37);

a processing system for converting data signals between a form adapted to one of the plurality of local terminal ports and a form adapted to the remote access port (Haller: col. 8, lines 19-25; col. 12, lines 28-40; col. 15, lines 27-41);

a multiplexor in communication with said processing system to multiplex the converted data signals from the at least two of the local terminal ports to communicate data of the local terminals simultaneously via said remote access port to the service provider (Haller: Fig. 4; col. 13, lines 57- col. 14, line 5; col. 7, lines 35-41);

a demultiplexor in communication with said processing system to demultiplex the data signals from said remote access port to communicate data to the local terminals simultaneously via said local terminal ports (Haller: Fig. 4; col. 13, lines 57- col. 14, line 5; col. 7, lines 35-41);  
and

a services unit that provides network services to one or more local terminal connected to the plurality of local terminal ports (Haller: col. 6, lines 50-62);

Regarding claim 24, the apparatus of claim 1, wherein said processing system is configured to facilitate a communications path between multiple local terminal ports (Haller: col. 18, lines 52-56; col. 19, lines 50-64).

Regarding claim 25, the apparatus of claim 1, wherein the at least two local terminal ports further use different data rates and data formats (Haller: col. 23, lines 19-29- teaches Bluetooth and rf baseband with operating in the 2.4 GHz band; col. 26, lines 11-17, lines 31-39- teach different formats and protocols with different rates for communication; col. 27, lines 19-27).

Regarding claim 26, the apparatus of claim 19, further comprising facilitating a communications path between multiple local terminal ports (Haller: col. 18, lines 52-56; col. 19, lines 50-64).

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Regarding claim 27, the apparatus of claim 19, wherein receiving local terminal data is performed at different data rates and different data formats (Haller: col. 23, lines 19-29- teaches Bluetooth and rf baseband with operating in the 2.4 GHz band; col. 26, lines 11-17, lines 31-39- teach different formats and protocols with different rates for communication; col. 27, lines 19-27).

Regarding claim 28, the apparatus of claim 23, wherein said processing system is configured to facilitate a communications path between multiple local terminal ports (Haller: col. 18, lines 52-56; col. 19, lines 50-64).

Regarding claim 29, the apparatus of claim 23, wherein the at least two local terminal ports further use different data rates and data formats (Haller: col. 23, lines 19-29- teaches Bluetooth and rf baseband with operating in the 2.4 GHz band; col. 26, lines 11-17, lines 31-39- teach different formats and protocols with different rates for communication; col. 27, lines 19-27).

Regarding claim 30, the apparatus of claim 1, wherein the simultaneously communicated data is communicated using time-division multiple access (Haller: col. 28, lines 52-61; TDMA line 60).

**Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable by U.S. Patent No. 6,804,558 by Hallerton et al in view of U.S. Patent No 6,804,558 by Fan et al.**

Regarding claim 10, the Hallerton reference teaches the apparatus of claim 9. The Hallerton reference fails to teach a wearable glass computer or wearable audio computer.

However, the Fan reference teaches a wearable computer including at least one of a wearable eyeglass computer or a wearable audio computer (Fan: abstract; col. 3, lines 4-30) in order to provide the advantage of allowing the user to see or hear voice or video data, which Hallerton seeks (Hallerton: col. 42, lines 64-col. 43, line 10).

It would have been obvious at the time of the invention to one of ordinary skill in the art to create the apparatus for aggregating device communications as taught by Hallerton to include

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audio and eye glass computer as taught by Fan in order to provide to the user audio and voice data (Hallerton: col. 42, lines 64- col. 43, line 10).

### **REMARKS**

Applicant has responded to the notice of non-compliance with a proper amendment and request for continued examination.

#### **The Applicant Argues:**

That the Haller reference does not “disclose a multiplexer or other device in the communications module to allow data from the IMD’s to be communicated simultaneously to a remote communication system.”

#### **In response**, the examiner respectfully submits:

The examiner maintains the rejection. The Haller reference shows many local ports, many of which are associated with monitoring different aspects of the body see col. 2, lines 32-41. Fig. 4 illustrates the IMD is also a PCD and it visibly shows more than one wired connection to the IMD that acts as the intermediary to the remote station (col. 13, lines 57-col. 14, line 5; and previous citations). The simultaneous communication is realized in col. 7, lines 35-67 where an interrogative or instruction communication is performed.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin R. Bruckart whose telephone number is (571) 272-3982. The examiner can normally be reached on 9:00-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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